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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 10/091,117   | 03/06/2002  | Manfred Pfleger      | PFELGER=2                   | 5140             |
| 7590 10/28/2003  |             |                      |                             |                  |
| BROWDY AND NEIMARK, P.L.L.C.<br>624 Ninth Street, N.W.<br>Washington, DC 20001 |             |                      |                             |                  |
|  |             |                      | EXAMINER<br>SUNG, CHRISTINE |                  |
|  |             |                      | ART UNIT<br>2878            | PAPER NUMBER     |

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/091,117             | PFLEGER, MANFRED    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Christine Sung         | 2878                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-8 are objected to because of the following informalities:
2. Claim 1 recites the limitation " the respective pulse rates " in line 14 of the claim. There is insufficient antecedent basis for this limitation in the claim. Although the claim discloses a pulse amplitude spectrum, pulse rates have not been defined.

Further regarding claim 1, the preamble of the claim notes that it is a method for suppressing extraneous radiation influences, however, none of the steps specifically reflect actually performing the particular step.

The balance of claims are objected to for being dependent upon an already objected claim.

Appropriate correction is required.

### ***Allowable Subject Matter***

3. Claims 1-8 allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter is that the claim includes specific steps to detect radiation, including steps to reduce erroneous radiation measurements, namely by defining a set measurement channel that confines the usable pulse amplitude spectrum, defining a substitute channel that consists of a portion of the measurement channel, and using the relationship between the measurement and substitute channels to determine a state when extraneous radiation is being produced, thus producing radiation data with greater accuracy.

Although references such as Blincow (US Patent 4,755,677) disclose using defined radiation sources with different energy levels to discriminate different count rates to determine the fill level of a tank, it does not specify the exact method as claimed in the instant application.

Further, the closest prior art reference Leisinger et al. discloses a method to compensate for extraneous radiation, however, this art reference requires the determination of a time frame during which the tank is exposed to extraneous radiation. Here, Leisinger determines the radiation counts before and during the period of extraneous radiation, and removes the effect of the radiation from the data collected during the absence of the radiation. The data during which there is no extraneous radiation is then used to "calibrate" the measurement data, by subtracting it from the measurement data. However, in the present application, the measurement data is "calibrated" by using the substitute channel measurements to determine when the measurement data has been affected by extraneous radiation.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. US Patent 5,218,202- this reference discloses a fill level detection method including the use of a threshold detector output pulse to determine if the radiation is due to a measurement or is extraneous.
- b. US Patent 6,548,814- this reference discloses a similar fill level detection device and method.
- c. US Patent 6,104,033- this reference discloses a method of determining fill level of a tank using algorithms to mathematically determine fill level.

- d. US Patent 3,246,150- this reference discloses a radiation measuring apparatus with an automatic background subtraction means.
  - e. US Patent 4,755,677- see above allowable subject matter.
6. This application is in condition for allowance except for the above formal matters.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

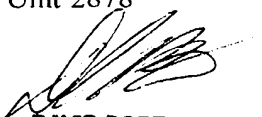
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 703-305-0382. The examiner can normally be reached on Monday- Friday 7-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CS

Christine Sung  
Examiner  
Art Unit 2878



**DAVID PORTA**  
**SUPERVISOR/SENIOR EXAMINER**  
**TECHNOLOGY CENTER 2800**